ABSTRACT OF THE DISCLOSURE

A tuned spring group with load springs, control springs, and a frictional damping arrangement for a railcar truck assembly provides better ride quality, increased resistance to suspension bottoming, and increased hunting threshold speed of a railroad car. Specifically, this tuned damping and suspension arrangement provides a spring group reserve capacity of less than 1.50. Spring assemblies for different car types are tuned such that a reserve ratio less than 1.50 may be achieved. By reducing the spring assembly reserve capacity for a railcar and truck of a standard weight and configuration to less than 1.50, an unexpected result of a decrease in maximum vertical acceleration as the railcar truck assembly approaches a speed of 55 miles per hour is achieved. The decrease in vertical acceleration allows for improved ride quality, increased resistance to suspension bottoming and increased hunting threshold speed of the railcar.